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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/607,768

06/27/2003

Bryan J. Root

14451.01

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08/09/2005

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EXAMINER

NGUYEN, TUNG X

ART UNIT

PAPER NUMBER

2829

DATE MAILED: 08/09/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

41A

<b>Office Action Summary</b>	<b>Application No.</b> 10/607,768	<b>Applicant(s)</b> ROOT ET AL.	
	<b>Examiner</b> Tung X. Nguyen	<b>Art Unit</b> 2829	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 26 May 2005.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1,2,4-9 and 11-20 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1,2 and 4-9 is/are allowed.
- 6) ☒ Claim(s) 11-19 is/are rejected.
- 7) ☒ Claim(s) 20 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 27 June 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Claim Rejections - 35 USC § 102*

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claim 11 are rejected under 35 U.S.C. 102(b) as being anticipated by Costello (u.s.p 6,124,723).

As to claim 11, Costello disclose in Fig. 2, a shield probe apparatus for testing a semiconductor device comprising: a shielded probe (90, 74, 76 of figure 2) for probing the semiconductor device (wafer or device under test is held on an upper surface of chuck 52, see the abstract); a tri-axial cable (74, 76, 90 of figure 2);

A shielded chassis (78, 80 of figure 2) with the articulated arm (72) of the probe manipulator by means of a collar (73) for holding the tri-axial cable; wherein the tri-axial cable and the shielded probe being configured and arranged to connect to each other within the shielded chassis; and wherein the tri-axial cable coupled to a tester for testing the device under test (wafer, see col. 1, lines 5-15).

### *Claim Rejections - 35 USC § 103*

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 11-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Costello (u.s.p 6,124,723), in view of Schwidt (u.s.p 6,075,376).

As to claim 12, Costello discloses all limitation except for a dielectric layer surrounded to the probe pin; and a conductive guard layer surrounded the dielectric layer. However, Schwidt discloses in Fig. 5, the shielded comprising: a dielectric layer (52a of figure 5) surrounded to core (50a) couple to the probe pin; and a conductive guard layer (54a, 56a of figure 5) surrounded the dielectric layer (52a of figure 5). It would have been obvious to a person having ordinary skill in the art at the time the invention was made to modify the system of Costello, and provide the shielded probe, as taught by Schwidt for accurately measuring the data received from device under test at high frequency testing.

As to claims 13-14, Schwidt discloses in Fig. 5, the tri-axial cable comprising: a center signal conductor (50a of figure 5); a dielectric layer (52a of figure 5) surrounded the center signal conductor; a conductive layer (54a, 56a of figure 5) surrounded the dielectric layer; a guard layer (68) surrounded the conductive layer; a second dielectric layer (66) surrounded by the guard layer (68); a shield surround the second dielectric layer (68); and protective cover (58a) surround the shield.

As to claims 15-16, Costello discloses in Fig. 5, the probe pin (92 of figure 5) and the center signal conductor (90a) are electrically connected to each other.

As to claim 17, Costello discloses in Fig. 5, a shrink tube (90b) to shrink-tube the probe pin and the center signal conductor.

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As to claim 18, Schwindt discloses in Fig. 5, the conductive guard layer (54a) of the shielded probe and the guard layer (68) of the tri-axial cable are electrically connected to each other.

As to claim 19, Schwindt discloses in Fig. 5, a second shrink tube (58a) to shrink-tube the conductive guard and the guard layer.

***Allowable Subject Matter***

5. Claims 1-2, 4-9 are allowed.
6. Claim 20 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.
7. The following is a statement of reasons for the indication of allowable subject matter:

As to claims 1-2, 4-9 and 20, the prior art does not teach or suggest the guard layer of the tri-axial cable is driven to the same potential as the center signal conductor, and the shield of the tri-axial cable is grounded to the shielded chassis.

***Response to Arguments***

8. Applicant's arguments filed 5/26/05 have been fully considered but they are not persuasive.

As to claims 11-19, Applicant argues that Costello in view of Schwidt do not teach or suggest a shielded probe capable of electrically testing semiconductor device at a sub 100fA operating current and an operating temperature up to 300C.

In response to Applicant's arguments, the recitation that has not been given patentable weight because it has been held that a preamble is denied the effect of a limitation where the claim is drawn to a structure not depending for completeness upon the introductory clause. *Kropa v. Robie*, 88 USPQ 478 (CCPA 1951).

***Conclusion***

9. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.


10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tung X. Nguyen whose telephone number is (571) 272-1967. The examiner can normally be reached on 8:30am-5:00pm M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nestor Ramirez can be reached on (571) 272-2034. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

TN  
7/28/05

  
VINH NGUYEN  
PRIMARY EXAMINER  
A-u-2829  
08/05/05